

# Flat head syndrome: a child healthcare intervention

<b>Submission date</b> 05/05/2018	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 09/05/2018	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 21/06/2019	<b>Condition category</b> Musculoskeletal Diseases	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

Background and aim of the study

Flat Head Syndrome is a common problem among infants today. The aim of the study is to evaluate the effect of an intervention on prevention and reversal of Flat Head Syndrome.

Who can participate?

All child health nurses employed in January 2012 at child health care centers in the County of Skaraborg Sweden, infants born in the County of Skaraborg Sweden January 2012 - October 2012 and their parents.

What does the study involve?

The intervention is two-armed. First one group of nurses (intervention group) were educated about Flat Head Syndrome and asked to work according to specific guidelines while control group nurses were not. Then newborns were recruited. Parents brought their infants to the child health clinics according to the national schedule and followed their nurses' advice on Flat Head Syndrome. Infants' head shape was judged when infants were at their 2-, 4-, and 12 month well-child visits.

What are the possible benefits and risks of participation?

Benefits of the study include increased knowledge for participating nurses and parents on Flat Head Syndrome prevention and reversal. For individual infants it is possible that participation helps them avoid developing Flat Head Syndrome. Participation does not involve any risks.

Where is the study run from?

The study is run from 26 child health care clinics in the Skaraborg County of Sweden.

When is the study starting and how long is it expected to run for?

The study starts January 1, 2012 and continues until October 31, 2013.

Who is funding the study?

The Skaraborg Institute for Research and Development, R&D Center Primary Health Care Skaraborg, the Local Research and Development Council Skaraborg, and Närhälsan Götene Primary Health Care Clinic.

Who is the main contact?  
Freda Lennartsson, PhD student  
freda.lennartsson@gmail.com

## Contact information

**Type(s)**  
Scientific

**Contact name**  
Mrs Freda Lennartsson

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533 34

## Additional identifiers

**Protocol serial number**  
10/1029

## Study information

**Scientific Title**  
Nonsynostotic plagiocephaly: a child healthcare intervention in Skaraborg County in Sweden

**Study objectives**  
The assumption was that most nonsynostotic plagiocephaly (NSP) can be prevented if child health nurses are educated about NSP and provide parents of infants with early and on-going tailored counseling, and if parents in turn implement recommendations in their infant care.

**Ethics approval required**  
Old ethics approval format

**Ethics approval(s)**  
Regional Ethical Review Board in Gothenburg, 20/06/2011, Dnr 418-11

**Study design**  
Longitudinal single-blinded interventional study

**Primary study design**  
Interventional

**Study type(s)**  
Prevention

**Health condition(s) or problem(s) studied**

## Nonsynostotic plagiocephaly (NSP)

### Interventions

All child health nurses employed in the county's child health care centers in January, 2012 were asked to participate in the study. Group assignment was according to clinic: if any nurse at a child health clinic had previous exposure to the project (participated in the pilot study or attended a continuing education group lecture in December 2010), all nurses at that child health care center were placed in the intervention group. Only nurses at child health centers where no nurse had previous exposure to the project were placed in the control group. Infants and parents were placed in the same group as their nurse.

Clinics were randomised to the following interventions:

1. An educational intervention where intervention group nurses were taught about nonsynostotic plagiocephaly.
2. A clinical intervention where child health nurses in the intervention and control groups gave advice to parents of infants on prevention and reversal of nonsynostotic plagiocephaly at well-child visits.

Intervention group nurses were educated in small group sessions or individually at their workplace. Sessions took about 1.5 hours for each group of nurses. These sessions were conducted during January 2012.

The duration of the study was 1 year for each infant and parent. Nurses began informing parents about NSP at the first home visit, which takes place when infants are about 1 week old. Cranial head shape of each infant was assessed at their 2-, 4-, and 12-month well-child visit. Infants born in Skaraborg County in February, 2012 and their parents were recruited to the study.

Recruitment period was extended from late January and until there was a sufficient number of infant participants in each group. The last infants were recruited in October 2012.

### Intervention Type

Other

### Primary outcome(s)

Cranial shape of 176 intervention group and 92 control group infants at 2-, 4-, and 12-month visits. Severity Assessment for Plagiocephaly and Severity Assessment for Brachycephaly were used as assessment tools.

### Key secondary outcome(s)

Cranial measurements were taken in order to reliability-test 12-month cranial assessments since the assessment tools have subjective components that increase the variation. Cranial vault asymmetry index (CVAI) was calculated from the two transcranial diagonals, and cranial index (CI) was calculated from the cranial length and cranial width measurements.

### Completion date

31/10/2013

## Eligibility

### Key inclusion criteria

1. Child health nurses working in child health centers in Skaraborg County in Sweden in 2012
2. Infants born January-October 2012 in Skaraborg County in Sweden whose parents provided written informed consent
3. Parents of these infants

**Participant type(s)**

Mixed

**Healthy volunteers allowed**

No

**Age group**

Mixed

**Sex**

All

**Total final enrolment**

268

**Key exclusion criteria**

Did not meet inclusion criteria or consent to participation

**Date of first enrolment**

01/01/2012

**Date of final enrolment**

31/10/2012

**Locations****Countries of recruitment**

Sweden

**Study participating centre**

**Barnavårdscentral Närhälsan Götene Vårdcentral**

Torggatan 4

Götene

Sweden

533 34

**Study participating centre**

**25 additional child health care centers in Skaraborg County**

Sweden

533 34

**Sponsor information**

## Organisation

The Skaraborg Institute for Research and Development

## Funder(s)

### Funder type

Not defined

### Funder Name

R&D Center Primary Health Care Skaraborg

### Funder Name

The Local Research and Development Council Skaraborg

### Funder Name

Närhälsan Götene Primary Health Care Clinic

## Results and Publications

### Individual participant data (IPD) sharing plan

The datasets generated during the current study (birth-related data, cranial asymmetry assessments, cranial measurements) and the analysis will be available to view upon reasonable request by contacting Project Leader Freda Lennartsson, [freda.lennartsson@gmail.com](mailto:freda.lennartsson@gmail.com). Datasets are coded and participants are not identifiable. However, data will only be shared with researchers interested in plagiocephaly prevention by viewing data together with the project leader, since no consent was obtained from participants to send files containing data.

### IPD sharing plan summary

Available on request

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	06/02/2019	21/06/2019	Yes	No
<a href="#">Participant information sheet</a>		09/05/2018	02/04/2019	No	Yes
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes